DETAILED ACTION

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Patrick Wamsley on 4/28/2009.

The application has been amended as follows:

Claims 13-25 are cancelled.

Claim 1 line 2 "partitionable" has been changed to –partitioned--.

Claim 1 line 5 "partitionable" has been changed to –partitioned--.

Claim 1 line 9 "partitionable update" has been changed to –partitioned update--.

Claim 1 line 9 "partitionable data" has been changed to –partitioned data--.

Claim 1 line 10 "partitionable control" has been changed to –partitioned control--.

Claim 1 line 10 "partitionable update" has been changed to –partitioned update--.

Claim 3 line 2 "partitionable" has been changed to –partitioned--.

Claim 4 line 2 "partitionable" has been changed to –partitioned--.

Claim 5 line 1 "partitionable" has been changed to –partitioned--.

Claim 9 line 1 "partitionable" has been changed to –partitioned--.

Claim 26 lines 7-8 "said forwarding" has been changed to --forwarding--.

Allowable Subject Matter

1.   Claims 1-12, 26 and 28-31 are allowed.

Reason for Allowance

1.   The following is an examiner's statement of reasons for allowance:

The prior art of record does not teach the following:

In regards to claim 1 the prior art does not teach a partitioned update agent plane coupled to both partitioned data plane and partitioned control plane, partitioned update agent plane comprising: a control plane update agent module that maintains at least one redundant set of routing table information in a plurality of control plane update buffers that are coupled to plurality of routing tables, wherein control plane update buffers are located on control plane, and wherein control plane update agent module synchronizes routing tables to each other; and a data plane update agent module operably coupled to control plane update agent module to coordinate forwarding information with routing table information in association with a plurality of data plane update buffers that are coupled to forwarding tables, wherein data plane update buffers are located on data plane, and wherein forwarding tables are maintained, updated, and redundantly engineered independently of failures on routing tables.

In regards to claim 26 the prior art does not teach a first network element and a second network element are each comprised of a router with decoupled control and data planes and a separate update agent plane further comprising a control plane

update module that synchronizes a plurality of routing tables to each other on control plane, whereby forwarding tables are maintained, updated, and redundantly engineered independently of failures on routing tables, wherein router comprises: a plurality of control plane nodes that effectuate routing process functionality based on control updates from peer elements in distributed network, each control plane node including a routing information database with routing tables and a control plane update buffer; a plurality of data plane nodes that forward data based on routing process functionality, each data plane node including a forwarding information database with forwarding tables and a data plane update buffer; and the separate update agent plane comprising a control plane update agent that synchronizes routing tables on control plane node and a data plane update agent that synchronizes forwarding tables on data plane node, wherein data plane update agents and control plane update agents update forward information databases and routing information databases in an asynchronous manner.

In regards to "data plane", "update agent plane" and "control plane" the specification states:

[0006] By way of an exemplary implementation, a data plane node may include one or more processing engines, one or more forwarding tables with associated update buffers and a data plane update agent. Likewise, a control plane node may include one or more control processors, one or more routing tables with associated update buffers and a control plane update agent.

[0017] Each of the planes may preferably be embodied as a cluster-based, scalable distributed network, partitionable into one or more nodes.

[0019] Although not specifically depicted in FIG. I, it should be understood that each of the planes is provided with appropriate databases and processing elements (e.g., routing tables with routing information base or RIB instances in the CP domain and forwarding tables with forwarding information base or FIB instances in the DP domain) that may be distributed among the cluster nodes of the plane. In order to achieve fault tolerance in the routing element I00, an inter-plane updating mechanism 106 is disposed between the CP cluster 104A and the DP cluster 104B for providing a loose coupling there between.

[0025] The partitions of the control plane may be organized into multiple CP blades with redundancy, where a separate instance of each control plane process can run on each blade, one of the blades being active and the other blades being standby. Regardless of the blade architecture, each CP node of the partition includes an update agent that controls coordination between a routing table (i.e., RIB) used for effectuating the routing process supported by the node and its update buffer mage. Although not specifically shown, one or more control processors are included for executing a routing process application based on applicable protocols.

The prior art alone or in combination fails to jointly suggest or teach the claimed combination of features as taught by the instant application. Therefore claims 1-12, 26 and 28-31 are to be deemed statutory and allowable over prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SALMAN AHMED whose telephone number is (571)272-8307. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Salman Ahmed/

Examiner, Art Unit 2419